

Suffering from Chronic Renal Insufficiency

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Inappropriate use of public finance is to the detriment of the state of health of the patients, and hits the healthy in their pockets

Dunya Sakit,

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I first heard of this disease 7-8 years ago when I was working for *Yeni Musavat* daily newspaper. At that time, a patient who was in need of hemodialysis, but didn't have money for that (since each procedure required 250,000 (old) manats (50 new manats) – D.S.), applied to our newspaper for help, because the Ministry of Health had refused to render the corresponding assistance. When we submitted the information about the state of the applicant to a female who was, at that time, the head of the department on medical service arrangement, the answer came in the form that the Government hadn't allocated funding for the provision of hemodialysis for the patients; however, it was added that they could provide the applicant with one free-of-charge procedure per week (meaning that the remaining two hemodialysis sessions during the same week should have been provided as a paid service). To tell the truth, I didn't get to know about the further fate of the applicant; however, the case and what was said by the patient influenced me a lot, so I always showed an interest in reading information about the disease in question. In particular, after the Government had started to allocate money for a special program on tackling this issue, the increased frequency of the corresponding press reports – featuring the problems which the patients have come across – heightened my interest for the topic. Therefore, among the topics included in the journalist contest announced by the Open Society Institute – Assistance Foundation, I chose the one concerning the monitoring of the implementation of the action plan on chronic renal insufficiency.

It should be noted that chronic renal insufficiency is one of the most serious illnesses which the medicine is unable to preclude and which has an increasingly high prevalence rate thereby exposing human health to a higher extent of danger. The disease results in the failure of nephrons – functional units in the kidney, consisting of a glomerulus and their associated tubules, through which the glomerular filtrate passes before emerging as urine. This leads to the accumulation of harmful substances in the human organism and, consequently, to the failure of vital parts and fatal end. Specialists cite several major reasons behind the onset of chronic renal insufficiency – different renal diseases, hypertension, pancreatic (insular) diabetes, etc. The final phase of the disease is called 'terminal' period. At this stage, kidneys fail completely or partially, thereby causing the necessity of substitution therapy – the patient undergoes through a dialysis procedure, meaning blood clearance outside the human organism. Although the first international attempts to treat chronic renal insufficiency by means of dialysis had been made in the middle of the 19th century, the first successful human case was recorded in the Netherlands, in 1943, at the height of World War II. Then the method was improved in the United States and Europe. In modern medicine, hemodialysis (a method of treating kidney failure by using a machine to remove waste material from the kidneys), peritoneal dialysis (the abdomen is cleaned in preparation for surgery, and a catheter is surgically inserted with one end in the abdomen and the other protruding from the skin) and renal transplantation are the existing methods for kidney substitution therapy. In the former USSR (Soviet Union), wide application of dialysis concurred with the period that came after Mr Yuri Andropov, the chairman of the Central Committee of the Communist Party, had been taken ill with kidney failure in 1983; however, in the 1970s,

Academician Javadzada, at the Urology Center in Azerbaijan, supervised dialysis and renal transplantation procedures. Following the collapse of the Soviet Union, in 2000, 15 to 18 artificial kidney (hemodialyzer) devices (two Gambo and two Fresenius devices at the Hospital of the Treatment Commission under the Cabinet of Ministries; 4-5 Fresenius 2008 (old version) devices at the Central Urology Hospital, 6-8 Fresenius 4008 devices to the Central Oilmen's Hospital) and some 50 hemodialysis procedures were provided for different patients in Azerbaijan.

Why is the number of patients receiving hemodialysis in Azerbaijan below the world average?

In its report as of totals of December 31st, 2007, the European Renal Association – European Dialysis and Transplant Association (ERA-EDTA) stated that there were 662 renal failure cases per million people living in Europe, and that the patients were undergoing substitution therapy. In Portugal, the relative number of the patients was recorded at 1,372 people per million inhabitants, in Belgium – 1,109 people, Turkey – 719, Russia – 146, while Ukraine had only 85 renal failure cases per million residents. The corresponding performance of Japan and the United States – the countries that are regarded as not having dialysis deficiency – exceeded 2,060 renal failure cases per million residents. In Europe alone, the number of patients undergoing renal substitution therapy annually increases by 116 per million inhabitants. In 2007, Turkey had the highest number of patients – 231 per million inhabitants – who were accepted for substitution therapy, while the lowest showing – 20 patients per million inhabitants – was recorded in Ukraine. According to the annual statistics provided by the World Health Organization, every year 800 to 1,200 people – out of one million inhabitants – are affected by renal insufficiency in different countries; hemodialysis treatment is prescribed for some 600 of the affected (per million inhabitants).

The world average rate of the patients undergoing renal substitution therapy is 600 per million residents. Given this figure, the corresponding number of such patients in Azerbaijan, a nation of 9 million, should exceed 5,000. However, according to the official data provided by the Ministry of Health, there were 1,183 patients undergoing hemodialysis therapy in Azerbaijan as of the end of 2009 (the reasons behind such a low figure will be clarified below – D.S.).

In many countries all over the world, it is the government who covers the cost of renal substitution therapy for the patients suffering from chronic renal insufficiency. In Azerbaijan, the provision of funding for such purpose has started with the implementation of the action plan on chronic renal insufficiency approved under the decree #179, of July 9th, 2006, by the Cabinet of Ministers. The plan involves a five-year period since 2006 through 2010. In accordance with the relevant funding scheme, some 11.8 million manats of the budgetary funds – under the item 'health expenses' – should have been allocated for the realization of the program in 2006, with 13 million manats to come in 2007, 15 million in 2008, 17 million in 2009, and 20 million in 2010. From the Ministry of Finance's response to our request, it has become clear that the first money for the implementation of the program had been provided in 2007, with the allocation of 12.4 million manats of budgetary funds. In 2008, an additional amount of 16.9 million manats were provided, while the size of the funding in 2009 and 2010 was measured at 19.3 and 19.8 million manats, respectively. In their relevant response to our request, the Ministry of Health said that some 10 million manats were spent on the implementation of the action plan in 2007, while in 2008 and 2009 the amount of factual expenses stood at 14.4 and 16 million manats, respectively. Subsequently, it became clearer that the factual project expenditures fell 15-20 per cent short of the planned estimates. There are several important reasons behind such failure to draw on the funds as planned. Firstly, this is related to improper budget projection. One of the crucial components of the action plan envisaged by the Ministry of Health – setting up of the

register of the patients suffering from chronic renal insufficiency – hasn't been operationalized yet. Though the introduction of the register would have made it possible to optimize the projection of the corresponding expenses. The other essential reason is caused by the wrong policy on the state support for the patients suffering from chronic renal insufficiency (Detailed information on this issue will be provided below – D.S.).

Consequences of deficient implementation of the imperfect program

It should be noted that the majority of experts, with whom we had talked on the subject concerned, have assessed the program as an instrument that has been developed quite poorly and has had a great deal of room for improvement. Interestingly, neither health professionals from the corresponding public institutions nor independent specialists have been engaged in the generation of the program in question. In an interview with us, Prof. Mehman Aghayev, the chief nephrologist of Baku City, has taken such situation as being normal, “the business of those in the Ministry of Health.” On the other hand, the involvement of relevant professionals would have ensured the creation of a more perfect document and its implementation in a more successful way.

The list of major shortcomings of the program includes the following:

1. The program has been generated by officials in the Ministry of Health and Cabinet of Ministers, without being subjected to public hearings, ensuring direct participation of treatment specialists in its development; thereby, it has become unable to identify and treat chronic renal insufficiency on time, but been designed to provide hemodialysis for the patients suffering from the illness in its most serious phase of development. Consequently, the activities carried out in the framework of the relevant action plan have failed to deal with chronic renal insufficiency as a serious and increasingly urgent social issue;
2. The program has general provisions for state support for the patients suffering from chronic renal insufficiency. In that particular way, the program has failed to include any precise mechanism that would have ensured targeted supply of services and medicinal preparations for the patients. The findings of our investigation have shown that the Ministry of Health uses the ministerial order #73, of June 9th, 2003, on the restoration of the activities of the hemodialysis department of the Republican Urology Clinic and Annex 1 to the order in question as the basis for the provision of state support for the patients suffering from chronic renal insufficiency. The order has provided for the setting up of a special commission, headed by the chief urologist of the country, in the Republican Urology Clinic, to “examine the patients in need for hemodialysis, and determine the course of therapy and therapeutic regimen for them.” Academician M. Javadzade was the first chairman of the commission; the position was later taken over by Fariz Babayev, the head of the hemodialysis department at the Republican Urology Clinical Hospital. However, the corresponding item in the order was implemented in the year 2005 only. The commission operates to refer the patients suffering from chronic renal insufficiency to hemodialysis departments and regulates such referral activities. In accordance with the order, irrespective of their subordination status and the form of property, hemodialysis departments operating in the country are not allowed to accept the patients without the corresponding approval and referral by the chief specialist at the Ministry of Health. Pursuant to Annex 1 to the order, a patient may not be accepted to a hemodialysis center that is located more than 100km from their place of residence. Going beyond the framework of the order concerned, there is not any other document regulating the state support with respect to medical examination and therapy of the patients

suffering from chronic renal insufficiency. However, in May 2009 the health minister approved an order on the direct supply of medical drugs and other medicinal preparations from the Innovation and Supply Center of the Ministry of Health to hemodialysis departments of the Treatment and Diagnostics Centers subordinated to the State Oil Company of the Azerbaijan Republic (SOCAR). In an interview with us, Mr Zahid Garibov, the deputy head of the Innovation and Supply Center of the Ministry of Health, has said that supplies are strictly supervised in order to preclude every means of irregularities and negative consequences, thereby meeting the corresponding needs of regional centers: “Every month regional centers supply us with information concerning their needs for (medical drugs and other medicinal preparations) for the upcoming month. Only after the verification of the requests against the actual state of affairs, do we approve and ensure the supply.” On the other side, the inspections by the Center have proven to be insufficient to reveal negative cases. The unpalatable truth is that many patients, acting in collusion with physicians, unnecessarily get expensive medical drugs on a free of charge basis and sell them afterwards. It should be noted that such abuse cases are also observed with respect to other illnesses (pancreatic (insular) diabetes, etc.) which are treated through the state support for the supply of the corresponding medical drugs.

3. On a general note, the country has developed a very limited legislative framework for the introduction of the program and regulation of the state support for the patients suffering from chronic renal insufficiency. There hasn't been crafted any document concerning the instructions on how to give a patient an injection (required for the treatment of the patient thereof), regulating the frequency of the corresponding tests, maintenance of dialysis devices, activities to be carried out by the medical staff taking care of the patients, the level of professionalism of the staff thereof, and other procedures. As a result, conflicts often taken place between patients and the medical staff. For comparison, neighboring Turkey has developed a perfect legislative framework regulating all the above-mentioned issues. The Ministry of Health of Turkey has approved special rules governing in detail every single aspect of the above-mentioned issues – from the provision of state-supported services and relevant procedures for the patients suffering from chronic renal insufficiency to the scope of the corresponding requirements to service providers (clinics) and the medical staff involved; the rules entitled *Instructions on Dialysis Centers* became effective following their publication in the 25809th issue of Resmi Gazete (official newspaper) on May 8th, 2005.

Action plan remains on paper

As has been noted above, some important components of the program, which has been composed of seven components altogether, haven't been implemented while the others have been implemented in part. The answers which the Ministry of Health has provided in response to the relevant request from our side, the interviews and conversations which we have had with the staff employed by public and privately owned health facilities and with the patients have made it possible to throw light on the situation with the realization of different components of the program. It has turned out that no action had been towards **setting up the register of the patients suffering from chronic renal insufficiency**, as well as the introduction of up-to-date modalities concerning provisional diagnosis and prevention of the illness. The register hasn't been set up and has been included in the second program embracing the time frame from 2011 through 2016 (according to the statement which Mr Fariz Babayev, the chief uronephrologist of the country and the chairman of the corresponding commission under the Ministry of Health, made to the conference on the occasion of the World Kidney Day on March 11th, 2010 – D.S.).

As far as the **introduction of up-to-date modalities concerning provisional diagnosis and prevention of the illness** is concerned, unfortunately, no real action has been taken in that respect. In confirmation of such words, the people affected by pancreatic (insular) diabetes – one of the major reasons causing chronic renal insufficiency – are not tested on a regular basis. The international practice shows that the above-mentioned patients, who are considered as a major risk group for chronic renal insufficiency, should regularly undergo the corresponding examination. On the other side, although the provision of medicines for diabetics in Azerbaijan is supported by the state, the corresponding tests are officially recognized as services for a fee, while examinations and checkups are paid for unofficially. On a general note, there isn't any requirement by the state towards the medical examination to be done on the patients – who are classified into different risk groups such as pancreatic (insular) diabetes, hypertension, intrahepatic calculus, etc. – against their affection by chronic renal insufficiency. Though such examinations would have provided an opportunity to detect the illness at its early stage and prevent its further development by means of conservative therapy, thereby saving dozens of millions of manats and tens of thousands of human lives.

Another important component of the program – **preparation of study guides and delivery of training programs with the purpose to examine and treat for chronic renal insufficiency in accordance with international standards** – is implemented partially, since the Ministry of Health provides technical training for the staff who are employed by the hemodialysis centers under its subordination. In addition, Mr Fariz Babayev says that a training series has been organized for nephrologists in the Urology Clinical Center. Yet this training project hasn't met the need for nephrologists in the regions of the country. The preparation of study guides – an important part of the entire work – remains almost disregarded. What is at the center of attention is the collection of study guides published by *Medservis* clinic. Every patient who has received hemodialysis at this clinic has said that they had used the above-mentioned study guides. A book entitled *Dialysis* co-authored by Prof. M. Aghayev and Mr Soltan Aliyev, the head of one of the departments at the Ministry of Health, and published in February 2010 is not an adequate response to the corresponding needs. Specialists think that if the level of professionalism of the medical staff is fundamental in prolonging the life of a patient suffering from chronic renal insufficiency, the behavior of the patients themselves is another crucial aspect of the issue concerned. The sooner the Ministry of Health starts to work on the improvement of the awareness of such behavioral practices the longer the life of a patient could be.

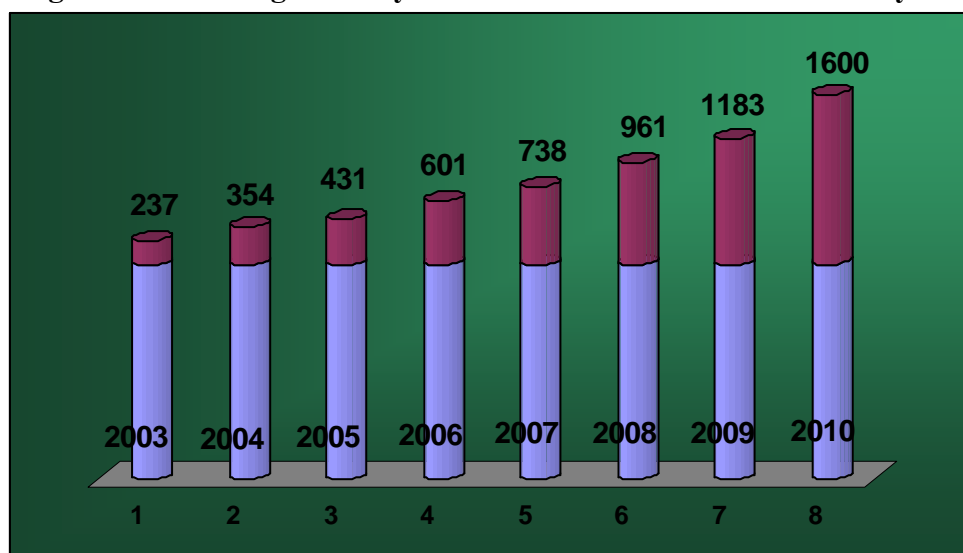
According to the findings of the corresponding studies, activities in the field of **setting up nephrological departments in health facilities equipped with artificial kidney apparatus and qualified health manpower development and advanced training** cannot be considered as having been adequate to accomplish the task. In addition to objective reasons – need for several years for qualified health manpower development – behind such results, there are subjective factors as well. The Ministry of Health, as the only state agency in charge of regulation of health issues in the country, needs to make forecasts on future trends in illness cases, identify the problems and needs of particular areas, and place adequate orders, thereby ensuring that the relevant work is done on time. All in all, work on qualified nephrologist development should have started earlier than the activation of the training component of the corresponding state program. As far as the development and training of middle-level staff is concerned, Baku-based hemodialysis centers have reached certain positive results in that respect; however, the training series has failed to translate into adequate achievements in the regions of the country. It has become clear from our interviews with patients that even the middle-level staff employed by Baku-based hemodialysis centers hadn't got adequate knowledge and skills. A patient, who received hemodialysis procedures in Turkey, in a private health center operating in the Central Oilmen's Hospital in Baku, and now in another Baku-based hemodialysis center supported by the state, has said that the state-supported center is significantly behind the first two locations in

terms of the quality of service and level of professionalism of the staff employed. Another patient who used to undergo hemodialysis procedures at *Medservis* clinic told us that nurses at the state-supported center – where our interlocutor had been later referred to – had been struggling to connect his veins to the artificial kidney apparatus for about two months (the interviewees receiving hemodialysis through the state support program talked about their problems on condition of anonymity, so we had to accept their request not to disclose their names, otherwise, they could confront the power of the corresponding government agency in the future – D.S.). The problems become more serious in regions. Citing Prof. Mehman Aghayev, “Azerbaijan’s root problem is that dialysis is not prescribed by nephrologists, but is authorized by physicians with another specialization. On the global scale, however, only the nephrologists prescribe the treatment in the final stage of chronic renal insufficiency.” Therefore, the assignment of qualified staff to regions remains a crucial issue to be solved.

Development of hemodialysis centers in towns (Shirvan, Sumgayit) and rural districts (Barda, Gazakh, Goychay, Lankaran, Shamakhy, and Zagatala). This component has been practically implemented in full. The hemodialysis centers have become operational in all the planned locations, except for Goychay, Shamakhy and Sumgayit. On the other side, it is the State Oil Company of the Azerbaijan Republic (SOCAR) – not the Ministry of Health – that has set up the facilities in question. In Ganja, hemodialysis departments – except for the one operating in the cardio(reumato)logical hospital – have been set up by SOCAR at the therapeutic and diagnostic centers that belong to SOCAR itself. The company has provided funding for the provision of 10 hemodialysis machines, manufactured by the German company known as Fresenius, for each of the hemodialysis centers operating in Barda, Gabala (that covers the needs of the patients suffering from renal insufficiency in the rural districts of Aghdash, Gabala, Goychay, Ismayilly, Oghuz, Ujar and Zardab), Ganja (town), Gazakh, Lankaran, Shirvan (town), Siyazan, and Zagatala (Balakan, Gakh, Sheki and Zagatala). Every center is capable of offering the corresponding services for 60 to 70 patients. According to the information which we have got from the Social Development Department of SOCAR, it is the Ministry of Health which covers the expenses related to the acquisition and delivery of all the necessary medicines and the supply of hemodialysis procedures. Mr Fariz Babayev adds that the Ministry of Health has started to meet the expenditures since May 2009 after SOCAR had ceased to finance the corresponding component of the program. All in all, there are 10 hemodialysis centers – equipped with 100 hemodialysis machines – presently operating in nine regions of Azerbaijan. The new centers are expected to become operational in Fizuli, Guba and Shamakhy in 2010. As far as the hemodialysis provision in Baku is concerned, there are seven like centers (the hemodialysis department in the Clinic #1 started to operate in January 2010 – D.S.) equipped with 132 machines.

According to EDTA standards, there must be at least 300 hemodialysis operations per million residents. This is a typical example for Eastern Europe countries which have recently started to address chronic renal insufficiency. For Western Europe countries, the corresponding figure stands at 600, while the performance of USA and Japan has reached 800. Azerbaijan has made 232 hemodialysis machines available for the corresponding procedures. Given that one hemodialysis machine serves three patients every day, and every patients received hemodialysis procedure every other day, then the number of hemodialysis operations will be 154 (number of machines multiplied by the number of patients per machine per day multiplied by the number of days and divided by the total population – $232 \times 3 \times 2 : 9$). This performance has barely exceeded the minimum standard for Europe. From that point of view, one can say that the official information by the Ministry of Health, concerning the provision of hemodialysis procedures for those who are in need of such procedures since January 2010, points out that the real ratio is very low. The question is that the official information shows a rapid increase in the number of chronic renal insufficiency cases over the past years (Diagram 1).

Diagram 1. Annual growth dynamics of chronic renal insufficiency cases



Source: M.Ağayev, S.Əliyev “Dializ” kitabı, Bakı – 2010 (Book entitled *Dialysis*, M. Aghayev, S. Aliyev, Baku-2010)

Mr Fariz Babayev is right by explaining the changes in making a record of chronic renal insufficiency cases rather than the pace of prevalence of the illness. Indeed, following the launch of the state support program, the people affected by chronic renal insufficiency have been trying to receive hemodialysis procedures from state-owned health facilities rather than private clinics. For that reason, during the first year of implementation of the program hundreds of such patients have been put on the waiting list. Although we have concurred with the ministry officials when they had clarified the agency’s stance towards the issue concerned, our conclusion is that the official data fail to mirror the actual number of the patients – suffering from chronic renal insufficiency – in the country. What we are sure is that the patients residing in locations that are dozens kilometers away from regional hemodialysis centers do not have an opportunity to go to these centers for hemodialysis procedures three times a week at the least. Let us have a look at the number of patients suffering from chronic renal insufficiency in rural districts of Gusar and Khachmaz. In his interview with us, Mr Arif Aliyev, the chief physician of Gusar District Central Hospital, has said that they don’t have precise information concerning the number of people suffering from chronic renal insufficiency (in the rural district of Gusar). Besides, he has added that the illness has a low prevalence rate in Gusar. He has gone on saying that so far they had registered only two patients suffering from chronic renal insufficiency. They have been referred to Siyazan Regional Treatment and Diagnostics Center where they receive hemodialysis procedures. “It is possible that the number of such patients won’t be confined to two. It means that there can be patients who haven’t turned to us, but have applied directly to the Ministry of Health. Since the treatment of such patients is carried out at the expense of public finance, there isn’t any pressing need for them to turn to regional hospitals. The patients falling under the category concerned are registered with the Ministry of Health and, after passing through the corresponding approval commission, are referred to nearby hemodialysis centers in their respective region.”

Mr Bahram Shahverdiyev, the chief physician of Khachmaz District Central Hospital, has spoken about similar views and facts. Noting that three patients suffering from chronic renal insufficiency have been registered with the regional hospital so far, the chief physician has added that one of them had already passed away: “One of the patients was very old and ailing, and already passed away. The remaining two are under treatment. They receive hemodialysis procedures at the Siyazan Regional Treatment and Diagnostics Center.”

Siyazan is a relatively longer – 60 to 80 km – distance for the patients in Qusar, Quba and Khachmaz. Only the patients in Davachi need to cover just 20 km to get to Siyazan. (Same can be said of the patients – living in southern regions of the country – who have to go to Lankaran, a major town in the south of Azerbaijan, in order to receive hemodialysis procedures – D.S.). In addition to the distance factor, the existing transport infrastructure in regions and the relevant fare which the patients pay for their movement by means of vehicles pang them to the innermost of their hearts. The point is that after reaching Siyazan, then receiving a longer-than-four-hour hemodialysis procedure, the patient has to return home – not an easy task to be accomplished after all. We have decided to play such role, travel to Siyazan and get to know how the hemodialysis department operates. However, a certain Khanlar, the chief physician of Siyazan Regional Treatment and Diagnostics Center, hasn't even let us in to the courtyard of the corresponding compound and described the location as a “closed health facility.” Despite our efforts, the chief physician hasn't bring clarity into when and why had the location in question become a closed facility?

Apparently, three years since the implementation of the program the regions of the country haven't been fully provided with the required hemodialysis systems. The reason behind such failure is that the number of registered patients suffering from chronic renal insufficiency doesn't correspond the reality – even after the inclusion of these patients in the relevant list, the full provision of hemodialysis procedures started three years later, in January 2010. While the worldwide number of the patients suffering from chornic renal insufficiency at the final – so-called ‘terminal’ – phase of the disease increases 10 to 15 percent per annum, in Azerbaijan, the Ministry of Health forecasts a rise of 35 percent, from 1,183 patients in 2009 up to 1,600 patients this year. One san suppose that the growth rate will be even higher, since hundreds of patients are still not able to receive hemodialysis procedures.

Ineffective use of public funds also does harm to entrepreneurship

Another very important information needs to be noted here – it is all about ineffectiveness of the way of provision of hemodialysis procedures. The Ministry of Health has allocated a greater portion of the program budget for the development of hemodialysis centers (to operate at the cost of the government). According to the information which we possess, in 2008 alone, the Innovation and Supply Center of the Ministry of Health spent 3.442 million manats on the acquisition of medical preparations (dialyzers, catheters, fistulas, etc.) and an additional amount of 0.782 million manats on the purchase of the corresponding devices and machines (hemodialysis machines, apparatus for the preparation of hemodialysis solution, water treatment stations, etc.) in order to meet the needs of the patients suffering from chornic renal insufficiency. Given that it costs 15,000 manats for the government to provide hemodialysis procedures per patient during a year (on the basis of the answers by the Ministry of Health to our request – D.S.), an extra number of 281 patients – suffering from chronic renal insufficiency – could have received hemodialysis procedures (had the Ministry prevented the misuse of funds). The amount that was spent on buying medical preparations and relevant machines in 2009 significantly exceeded the corresponding performance of 2008, thereby cutting yet bigger portion of the program budget off the direct aid for the patients concerned. On the other side, in many countries, including CIS nations, the private sector is widely involved in the development and operation of hemodialysis centers – a very cost-effective solution according to the international practice. The government's involvement in this scenario is that it estimates the size of the needs for dialysis in different areas, calculates the cost of provision of a hemodialysis procedure and the expenditures per patient, then announces the tender(s) on the supply of relevant services. To encourage privately owned health facilities to participate in the tender(s) announced, the cost of business should involve the premium as a fee for service to be offered by

a privately owned health facility. Turkey has gained a very successful experience in the relevant field of activities. The Government of Turkey pays privately owned health facilities 138 lira (the equivalent of 73 manats) per hemodialysis procedure; the figure has remained unchanged over the past five years. In addition to the hemodialysis procedure, the amount also includes biochemical analyses, food supply and the fee for the service(s) offered by the privately owned health facility. Patients only pay 15 lira per hemodialysis procedure received. In return they get high quality service, and regular supervision over their state of health. The delivery of a hemodialysis procedure can be arranged at home for those patients who are bedridden. The hemodialysis services provided by privately owned health facilities are taxable. Consequently, the country has managed to set up a sound competitive environment, and ensured the right of the patient to choose the corresponding service provider. As a result, more than 60,000 Turks dependent on hemodialysis do not face any problem with respect to their treatment.

In another neighboring country, Russia, the cost of a hemodialysis procedure – including analyses and medicines – was 2238.77 rubles (the equivalent of 76.83 manat) as of January 1st, 2008, but increased to 3747.62 rubles (the equivalent of 99.81 manat) during 2009¹. Since the corresponding payments are made out of regional budgets, there is a sharp difference between wealthier regions, on the one side, and the others, on the other side, in terms of hemodialysis operations.

In addition to local privately owned health facilities, both Turkey and Russia have got everything arranged for the extensive use of the capacities of leading manufacturers of dialysis. Each of the above-mentioned countries hosts dozens of dialysis centers operated by Gambro (Switzerland), Baxter (USA) and Fresenius (Germany) – the world's giants in the field of dialysis production. These companies have set up relevant dialysis centers themselves but provide the corresponding services for the patients at the cost of the government. In the meantime, the government only exercises the supervision over the medical staff and the quality of the services provided. As to Azerbaijan, the country has failed to benefit from either the capacities of privately owned health facilities or the opportunities provided by the manufacturers of dialysis. Mr Ogtay Mammadzada, candidate of medical sciences and the head of the hemodialysis department at the Central Oilmen's Hospital, holds firm to the opinion that SME development as a top priority on agenda for the government has failed to translate into practical action with respect to the provision of hemodialysis procedures: "My opinion on this is quite unambiguous. Entrepreneurs should be engaged in the setting up of hemodialysis centers. This will ensure the patient's right to choose ... so it is the patients who will choose themselves where they would like to receive hemodialysis procedures ... in state-owned or privately owned health facilities. On the other side, the involvement of the private sector adds mobility to better provision of hemodialysis services – contrary to state-owned health facilities, a private clinic can be faster at procuring necessary medical preparations, such as medicines and devices. Since the provision of dialysis requires a sufficient amount of money, all procurements by the government shall pass through multiple procedures. This, however, can take months (before the finalization of the corresponding contract). On the contrary, privately owned health facilities spend considerably shorter period of time on decision making and procurement activities. Besides, the purchase of such expensive equipment and appliances at the cost of the government is not efficient from economic viewpoint. Finally, Azerbaijan is the only country in the world in which the entire chain of hemodialysis provision activities relates to the scope of responsibilities of the government. In best cases, state owned health facilities provide only 30 percent of the entire volume of dialysis services." Evidently, in the framework of the program, which is the object of investigation, an impetus could have been given to the development of dozens of privately owned businesses in the country, thereby saving public finance worth of millions of manats.

¹ <http://www.astrahan.fas.gov.ru/page.php?id=173>

Have a look at the following picture: the government purchases equipment at high prices, allocates premises to accommodate service providers, pays salary to the medical staff involved in the provision of hemodialysis procedures, and covers the cost of operation of the entire infrastructure. As a result, the cost of a hemodialysis procedure in Azerbaijan advanced up to 115 manats in 2009. Consequently, despite the start of the program in 2007, only two months ago did it become possible to fully provide hemodialysis procedures for the recipients numbering less than 1,200 patients. Still peritoneal dialysis, renal transplantation – as crucial means of treatment – are not applied in practice in the country. Besides, no system of dialysis provision for children has been set up so far.

That hemodialysis centers belong to the state gives rise to unofficial payments – a serious problem existing in state-owned health facilities. Despite the press media has produced dozens of facts (alleging the existence of unofficial payments in state-owned health facilities), it isn't possible to say that practical action has been done to eliminate the problem². As far as privately owned health facilities are concerned, bribery cases are impossible. We needn't go far (to find examples) – no patient undergoing through hemodialysis procedures at the cost of the government at Renex and Medservis, the two privately owned health facilities providing the corresponding services in Baku, has been asked to pay extra during the period of implementation of hemodialysis orders which the Ministry of Health had placed on the clinics in question. According to what the patients have told us, the possibility of an extra payment is out of question. On the other side, instead of expanding such practices, the government officials have suspended the placement of relevant orders on privately owned health facilities thereby causing Renex to cease its activities in its capacity of hemodialysis service provider. According to our information, Medservis is under mounting pressure from the Ministry of Health who are seeking the suspension of the corresponding activities of the clinic. Unfortunately, the management of the clinic have decisively rejected to speak about the issue during a meeting with us (In the context of Azerbaijan's realities, it isn't so difficult to come to the point that have forced them to refrain from touching upon the problem – D. S.). Mr Ogtay Mammadzada, from the Central Oilmen's Hospital, who also owns Renex, has told us that they hadn't been under any pressure and had suspended their operations because of absence of patients: "We have 20 Fresenius machines. If there are patients, we can resume our operations today. We are ready to deliver a hemodialysis procedure for 60-70 manats. No pressure has been exerted on us. As matter of fact, out licence was prolonged for five more years at the beginning of this year."

What links a "love" for Fresenius to inflates prices?

In addition to having the untapped potential of privately owned health facilities, Azerbaijan has also failed to utilize the capacity of leading global manufactureres of dialysis, and has made the entire focus on Fresenius as the exsclusive supplier of the corresponding equipment and majority of medical appliances to the country. Fresenius seeks to cement its position – which the German company used to have in the former USSR market – in CIS nations. Consequently, the company has expanded its presence in relevant markets. It would be interesting to know that in other countries Fresenius sets up hemodialysis centers on its own account and makes income from the provision of relevant services, while in Azerbaijan it has secured a lucrative business of selling hemodialysis machines to the government which is supporting the delivery of hemodialysis procedures. The company has started its Azerbaijan's business strategy with setting up good relations with Heydar Aliyev Foundation. In each of the years 2006, 2008 and 2009, Fresenius donated 10 hemodialysis machines to the Foundation (in accordance with the media reports, citing the Foundation, each machine costs 20,000 euros – D.S.). At first sight, this action appears to be a humanitarian aid; however, the reality tells us that donation is an aimed policy pursued by

² <http://www.azadliq.org/content/article/1916661.html>

the manufacturers of medicines and medical equipment: the practice of donation of necessary medicines and appliances as a cure for the illnesses that are treated through the state support becomes an acquired habit for the recipients and prepares ground for the purchase of the corresponding drugs at later stages. Manufacturers of medical equipment also make income on selling genuine spare parts. It isn't only chronic renal insufficiency, but also other illnesses on which Azerbaijani officials have pursued the above-mentioned policies. In the framework of the program under investigation, in 2008 alone, 19 hemodialyzers – each costing 33,000 manats – were purchased at the expense of public funds. The Innovation and Supply Center reports that the German company has won the relevant open tender following the submission of the best bid.

On the other side, Baxter and Gambro – Fresenius' rivals in business – have offered much more favorable prices, both in and outside the framework of the tender in question. Their repeated price offers submitted for consideration to the Ministry of Health have been sent back. Incidentally, what kind of remunerative price has the government received from Fresenius if each hemodialyzer donated to the Heydar Aliyev Foundation had worked out to 20,000 euros (roughly the equivalent of 21,000-22,000 manats at the corresponding rates of exchange), while the government had paid 33,000 manats for the same machine? As a matter of fact, Fresenius benefits from its dominant market position (35 percent of the global market), thereby selling its equipment at a higher price. We have tried to understand that reasons behind the failure of Gambro and Baxter to sell the same equipment to our officials at almost half of the price offered by Fresenius (the highest price of these hemodialyzers on the world market doesn't exceed 13,000 euros – D.S.). Alas! Our efforts have turned out to no avail. Apart from the hemodialyzers manufactured by Fresenius, the local privately owned health facility known as *Medservis* utilizes the machines produced by Gambro, while the Central Military Hospital of the Ministry of Defense uses the hemodialyzers of BBraun (the patients, who had received hemodialysis procedures by means of the hemodialyzers manufactured by all the three companies, have told us that they don't encapsulate any feeling of difference (neither during the procedures nor afterwards). Experts share the same opinion and note the crucial importance is the dialysis unit instead – D.S.).

Mr Zahid Garibov, the deputy head of the Innovation and Supply Center, refused to answer our questions concerning the tenders, procured equipment and other issues pertaining to the framework of the program, by saying that he wasn't authorized to provide such information and referring us to Mr Anar Israfilov, a person in charge of implementation of the program and the head of the Ministry of Health's department the organization of medical aid. As soon as Mr Anar Israfilov heard our questions concerning the financial aspects of the program, he asked us to apply to the Innovation and Supply Center for the corresponding answers. Forwarding us from one structural unit to another, the ministry officials avoided from answering our questions. In our request for information submitted to the Ministry of Health, two questions concerning the financial aspects (of the program) remained unanswered, thereby forcing us to get some extremely important pieces of information from unofficial sources.

In addition to unfavorable financial conditions that Fresenius put forward in their tender bid, there was another important reason to take the company off the list of bidders. It turned out that the German company had set up direct relations with the administration of Nagorno-Karabakh, the breakaway province of Azerbaijan. According to Regnum, a news agency based in Russia, in the year 2004, Fresenius donated two hemodialyzers to the Ministry of Health of the separatist regime in Nagorno-Karabakh³. Mr Zahid Garibov, the deputy head of the Innovation and Supply

³ <http://pda.regnum.ru/news/328306.html>

Center, said that he had first heard of the news from us and that they would investigate the issue. It is possible that the Ministry of Health or the people promoting the business of Fresenius in Azerbaijan were unaware of the business with the separatist regime – de jure the territory of Azerbaijan – bypassing the approval from the central government in Baku. Anyway, we will continue our efforts to get information concerning subsequent actions on the issue concerned. Interestingly enough, Mr Zakir Taghiyev, the representative of Fresenius in Azerbaijan, told us that he was no longer in his capacity of the company representative, he suspended his work for Fresenius and that the answer to our questions could be obtained only from the head office in Germany. In the meantime, according to the information we possess, the Ministry of Health recently gave preference to buying dialyzers from BBraun.

Renal transplantation – cheapest means of treatment

On a global scale, renal transplantation is considered to be the most beneficial and least costly method for the medical treatment for chronic renal insufficiency. It goes without saying that dialysis, on the contrary, is a very expensive one. In the United States, the government covers 80 percent of the overall expenses pertaining to the treatment of the patients suffering from chronic renal insufficiency. The amount includes the cost of hemodialyzer, peritoneal dialysis, renal transplantation, as well as necessary pharmaceutical compositions and the corresponding tests. The remaining 20 percent is paid through insurance policies or on own account of the employed. The treatment of a patient over the age of 65 is fully covered by the state. In Europe, the cost of treatment is fully met through public finance. In January 2008, Mr James Gordon Brown, UK Prime Minister, announced the launch of the national program on struggle against renal pathology. The program makes the focus on regular checkups of and detection of the illness among the people identified as ‘risk group.’ Renal transplantation is increasingly in the spotlight of the international community, since the transplantation of kidney(s) onto a patient and his/her subsequent recovery is a significantly cheaper way of treatment as compared to dialysis procedures delivered for many years. In Europe, some 7 percent of the overall annual health budget is spent on treatment for chronic renal insufficiency; in monetary terms, this is the equivalent of billions of dollars. According to estimates, more than one trillion dollars are spent globally on efforts to treat chronic renal insufficiency. The growing prevalence rate of the illness means that the total expenditures will continue to increase. Therefore, renal transplantation is considered as the most efficient and cost-effective – incomparable from economic point of view – way of treatment of renal failure.

In Azerbaijan, renal transplantation practices began in the 1970s, but entered the period of stagnation since the country regained independence from Moscow in 1991. Patients suffering from chronic renal insufficiency went abroad – with Iran remaining the most favorite destination – for renal transplantation operation. The ‘exodus’ became particularly visible after 2000. Iran has developed a very liberal legislation on donorship (a voluntary agreement on donorship between two citizens of Iran is enough to light the green to transplantation operations – D.S.), thereby providing the necessary ground for cheaper cost of such operations. Patients in Azerbaijan often buy kidney(s) from their relatives, more frequently from strangers, then go to Iran for operation. In an interview with us, several specialists have admitted that many times they had been approached by different strangers willing to sell their kidney(s). This fact has been confirmed by the patients on whom similar operations had been done. Those willing to sell their kidney(s) don’t refrain from even posting the corresponding ads with newspapers⁴. The efforts by law enforcement agencies to combat such practices fail to produce effective results.

⁴ Səhiyyə Nazirliyinin orqanı olan “Tibb qəzeti”, 15 may 2007-ci il, 11(391)-ci sayı (*Medicine* newspaper, the press organ of the Ministry of Health; May 15th, 2007, issue 11(391))

Renal transplantation operations were done several times over the past five to six years – at the Republican Clinical Hospital named after Academician Mirgasimov, at the privately owned clinic of Prof. Kamal Abdullayev (with participation of Prof. Ali Taghizada from Iran's Urmiya University), at the Central Oilmen's Hospital (with participation of surgeons from Iran's Gazi University), at a hospital in Lankaran (by doctor Tahiri – whose name we couldn't get to know – who was invited from Iran). However such practices failed to always produce successful results – due to lack of supervision over the state of health of the patients who were operated by visiting surgeons, two out of the three people who were operated by doctor Tahiri passed away several months later. Prof. Mehman Aghayev, the chief nephrologist of Baku City, regarded such operations as an early move in the field of renal transplantation and expressed his certainty about high achievements to become visible in the country in the near future.

In September 2007, Academician Javadzade appeared in *Azərbaycan*, a daily government newspaper, with an extensive article making the focus on the necessity to increase an attention to renal transplantation issue: “There are 10 hemodialysis – two privately owned and eight public – centers currently operating in our republic. Some 750 patients undergo through hemodialysis procedures at the cost of public finance, with 180 more included in the waiting list. According to our survey, every year the number of people in need of hemodialysis is set to increase by 120 to 150. For government, a hemodialysis procedure costs 110-120 U.S. dollars, including technical equipment, medical preparations, maintenance of medical staff; the expenses per patient work out to 10,000-11,000 U.S. dollars per annum, while the corresponding figure may vary from 15,000 to 18,000 U.S. dollars in Russia, depending on the country's region, and from 20,000 to 25,000 U.S. dollars in the United States. Nowadays, it is possible to perform a renal transplantation operation on 5 to 10 percent of patients (suffering from chronic renal insufficiency). Given that the number of dialysis-dependent patients is set to increase, we think that it will be more expedient to focus on rehabilitation of patients through renal transplantation, thereby causing a decline in the number of the patients going abroad for such operations and in the number of complaints linked to hemodialysis procedures. It should be also taken into consideration that the monthly cost of medical treatment of the patients on whom renal transplantation operation has been done is several times lower as compared to the expenses caused by hemodialysis procedures (delivered to the patients suffering from chronic renal insufficiency). Therefore, 450 to 500 U.S. dollars to be spent monthly on the patients in question would be enough to solve the issue in a positive way, thereby prioritizing renal transplantation operations.”

At approximately the same time, the President of Azerbaijan signed a decree on making arrangements for the establishment of an up-to-date renal transplantation center at the Republican Urology Clinical Hospital. To implement the decree, a total of 8 (eight) million manats were allocated out of the the President's Reserve Fund, with an additional amount of 9.7 million manats coming from the capital investment item in the state budget. Despite the facility was inaugurated in January 2010, no renal transplantation operation has been done there yet. In addition, it hasn't become possible to complete the formation of the register incorporating data on behalf of the patients suffering from chronic renal insufficiency. According to Mr Fariz Babayev, the head of the hemodialysis department at the Republican Urology Clinical Hospital, from purely technical point of view, renal transplantation operation is not a difficult operation: “Many patients receiving hemodialysis want a renal transplantation operation be performed on them. However, this requires the corresponding directions (for further action). The job doesn't end with renal transplantation, post-operation examination of the patient is of crucial importance. On the other side, the selection of the proper donor is another important thing. Therefore, the selection of a patient, to be operated, and the donor must be done in a very careful way. In the initial phase in Azerbaijan, relatives will act in their capacity of donors. For the time being, there

are some 30 patients in Azerbaijan who are waiting to undergo a renal transplantation operation. Our center has been equipped with state-of-the-art equipment (to conduct such operations).”

Yet it hasn't been determined who will provide funding for the operations in question. Mr Fariz Babayev says that the government will bring clarify into the issue. It should be noted that many countries practice full or partial reimbursement of the cost of such operations by their respective governments; the government also covers the expenses linked to post-operation examination and treatment of the patients.

A number of patients speak about acute shortcomings in the field of nephrology in Azerbaijan; therefore, in case of many patients on whom renal transplantation was performed, the graft fails soon after the operation and the patients in question become dependent on hemodialysis again. Recently such cases were observed among dozens of patients who had gone abroad for renal transplantation operation. Mr Fikrat Aliyev is one of the above-mentioned patients who lives with dependency on hemodialysis for 6 (six) years. A resident of Shuvalan, a settlement on the outskirts of Baku, he was operated in Iran in 2004 – a kidney of one of his relatives was transplanted on to him. He says: “I spent more than 25,000 U.S. dollars and was operated in Iran afterwards. However, eight months later the kidney (that was transplanted on to me) failed. My major complaint is all about that (failure). I seek you help in this respect.” Specialists see the main reason behind the failure of the transplanted kidney in the lack to ensure the supervision over the state of health of the patient by a professional physician. However, Mr Fariz Babayev disagrees: “On a global scale, not all operations of that kind produce successful results. There is a renowned school of nephrology in Azerbaijan. We have Prof. Aghayev, Ilham Hamidov, Fuad Sardarly and others. We also engage young nephrology specialists in our activities, organize and conduct training programs in our center.” Answering to our questions concerning fatal cases in Lankaran, he said that those operations didn't have any relation to the Ministry of Health: “That doctor was invited by the State Oil Company (of the Azerbaijan Republic), so the Ministry didn't have any role in that.”

On the whole, specialists conclude that renal transplantation has become a global issue, the task to be accomplished by the entire team rather than one person, with the surgical aspect taking only 10 to 15 percent of the job. That's why, sustainable and high-quality renal transplantation requires comprehensive legal and medical arrangements. Recently some countries in the world have started to make efforts aimed at liberalizing their legislation on transplantation issues in general. Iran is a particular example, since in that country 50 percent of the patients suffering from chronic renal insufficiency had found the cure for the illness through renal transplantation operations. Spain has made similar progress. The achievements show that the corresponding efforts have been prioritized on agenda for many countries. Therefore, Azerbaijan needs to take relevant action on prolonging the lives of the patients living with chronic renal insufficiency, provide the required legislative framework for the settlement of renal failure cases that has become quite regular, and save public funds.

Some words about distinctive features of hemodialysis

Although some progress has been made with respect to **covering the needs of the patients with chronic renal insufficiency for pharmaceutical compositions**, yet there are problems to be solved. One of such matters has been noted above. Another extremely acute issue deals with the absence of the reports regulating the process of prescription of medicines. Indeed, the situation leads to uncertainties about precise medical drugs and the dose(s) in which these drugs need to be taken. Medical analysis – as the means necessary to make the proper prescription – is another problem. Although biochemical analyses have become free of charge since 2009, there are some other tests which patients suffering from chronic renal insufficiency have to go through on a

regular basis; however, public health facilities lack the corresponding analyzers, while the same procedures – parathyroid hormone, namely thyroid, calcium phosphorus, sodium chloride, potassium, vitamins, etc. – at privately owned medical institutions cost quite high.

According to Mr Ogtay Mammadzada, from the Central Oilmen's Hospital, the prescription of medical drugs is done individually depending on the needs of the patients: "That's because there are some patients who might need... let's say... albumin once a month... some might need it once a week, while some don't need it at all. The needs are determined on the basis of the corresponding test(s)." Notwithstanding with the fact that the majority of the tests are done at the cost of the government, some important and expensive tests are also carried out by privately owned medical institutions. On the other side, there are the tests which Azerbaijan isn't capable of doing. For example, we don't have analyzers to determine the level of vitamins. Though this type of test is fundamental in prescribing vitamin compositions for patients. In many countries, including Turkey, the level of vitamins (in the organism of the patients) is checked on a monthly basis, and the cost of such procedure is covered through public funds. In Azerbaijan, the availability of analyzers at high prices results in the impossibility to conduct such tests through the (financial) support from the government; on the other side, the corresponding support could lead to saving public funds through the prevention of negative cases such as prescription of irrelevant drugs and the consequences of such wrongdoings for patients.

In the course of our conversation with the patients receiving hemodialysis, an interesting piece of information has become available to us. It has turned out that a number of patients have caught hepatitis (B and C) during hemodialysis procedures which they had received. We have investigated the issue and revealed that the possibility of being infected by hepatitis and other viruses – in the course of hemodialysis procedures – is very high in many countries all over the world. Mr Ogtay Mammadzada thinks that the reason behind such threat is that dialysis procedure involves blood interaction: "However, I say with full certainty that the possibility of catching the virus through a hemodialysis machine is less than one percent. That's because the machine itself doesn't directly interact with blood. So the issue can be all about the lack of responsibility among patients or medium-level medical staff only." Anyway, the existence of this problem on the global scale has led to the delivery of hemodialysis procedures for hepatitis-infected patients in different places and by means of separate machines. Besides, the patients undergo hepatitis tests on a quarterly basis, while the medical staff go through the same examination every six months.

For the first time in Azerbaijan, all patients receiving hemodialysis were tested for hepatitis in December 2009, following the relevant order by Mr Ogtay Shiraliyev, the minister of health. According to Mr Rufat Ahadov, the head of the hemodialysis department at the City Clinical Hospital #3, on the global scale hepatitis has been detected among 50 to 60 percent of the patients receiving dialysis: "This is inevitable even in most renowned clinics. Following the order by the minister, hepatitis tests were conducted in our center for prophylaxis purpose, and the virus was detected among 46 out of 120 patients who were undergoing a course of medical treatment for chronic renal insufficiency at that time. Hemodialysis machines could be the cause of 0.9 percent of such cases. Some 10 to 15 percent of the corresponding hepatitis cases could be the result of blood transfusion and albumin injection. The remaining cases are identified as primary hepatitis cases. All patients undergo blood transfusion and – at least once – albumin transfusion. Albumin – an agent made of human blood treatment – is produced in Kiyiv (Ukraine). Nobody guarantees that albumin is free from hepatitis. As to prophylaxis measures, we are supplied with very expensive and high quality disinfectors. Before connecting a patient to a machine, the machine itself is disinfected by means of the disinfectors. Following disinfection, the number of hepatitis cases is declining sharply. In our department, initially hepatitis was detected among 80 out of 100 patients, and the number currently stands at 46 (out of 120

patients).” On the other side, Ms Zemfira Hasanova, the chairman of *Umid* civil society institution dealing with hemodialysis-dependent patients, says that hepatitis prevalence rate among the patients receiving hemodialysis is quite high: “Among 100 patients at least 80 to 85 are infected by hepatitis. This is an incurable virus, so the number of hepatitis-infected patients (dependent on hemodialysis) cannot decline per se. The decline is only caused by fatal ends, but such cases cannot contribute to a sharp decline (alleged by Mr Rufat Ahadov). For many years we have been coming up with proposals on providing certain medical drugs for the hemodialysis-dependent patients to help them undergo a course of treatment for hepatitis. However, nobody has taken our plan into consideration.”

Ms Zemfira Hasanova and her deputy, Ms Elmira Aghayeva, say that hemodialysis-dependent patients face a number of serious problems such as pension provision, and the inadequate level of professionalism of the medical staff in hemodialysis centers: “The scale of pension is very low. We have raised the issue to increase it, since all hemodialysis-dependent patients are classified as the 1st group disabled and, therefore, are not able to work. The amount of the pension which they receive is not enough to ensure normal living conditions for them.”

Note: The investigation has been carried out on the basis of the concept that had won the journalist contest announced by the Open Society Institute – Assistance Foundation.